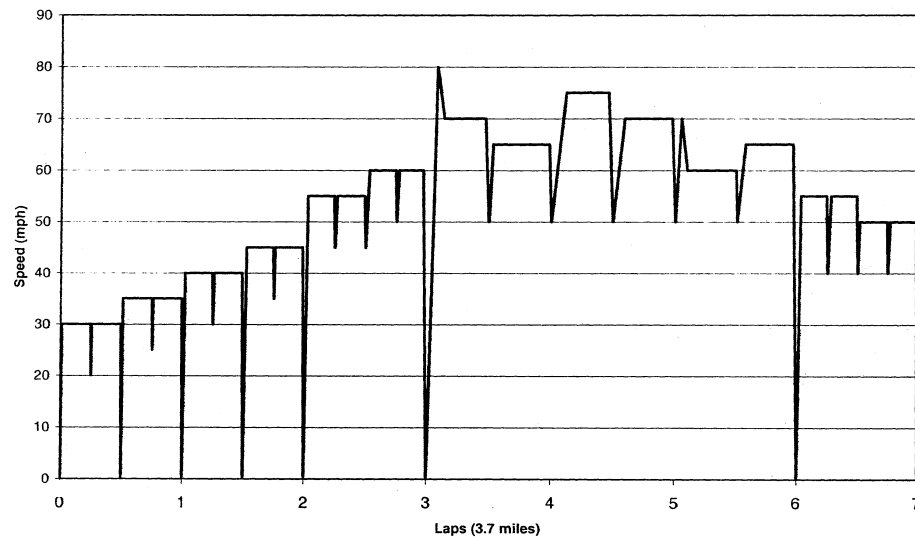


DESCRIPTION OF THE SRC—Continued

Lap	Description	Typical accel rate (MPH/s)
7	Mod. decel to 40 MPH	–5
7	Mod. accel to 55 MPH	2
7	Cruise at 55 MPH for ¼ lap	0
7	Mod. decel to 40 MPH	–5
7	Mod. accel to 50 MPH	2
7	Cruise at 50 MPH for ¼ lap	0
7	Mod. decel to 40 MPH	–5
7	Mod. accel to 50 MPH	2
7	Cruise at 50 MPH for ¼ lap	0
7	Mod. decel to stop	–5

The standard road cycle is represented graphically in the following figure:

Standard Road Cycle (SRC)



[71 FR 2837, Jan. 17, 2006]

APPENDIX VI TO PART 86—VEHICLE AND ENGINE COMPONENTS

(a) Light-Duty Vehicles, Light-Duty Trucks, Motorcycles, and Gasoline-Fueled Heavy-Duty Engines.

I. Basic Mechanical Components—Engine.

- (1) Intake and exhaust valves.
- (2) Drive belts.
- (3) Manifold and cylinder head bolts.
- (4) Engine oil and filter.
- (5) Engine coolant.

(6) Cooling system hoses and connections.

(7) Vacuum fittings, hoses, and connections.

(8) Oil injection metering system.

II. Fuel System.

(1) Fuel specification—octane rating, lead content.

(2) Carburetor-idle RPM, mixture ratio.

(3) Choke mechanism.

(4) Fuel system filter and fuel system lines and connections.

(5) Choke plate and linkage.

III. Ignition Components.

(1) Ignition timing and advance systems.

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(2) Distributor breaker points and condenser.

(3) Spark plugs.

(4) Ignition wiring.

(5) Operating parts of distributor.

IV. Crankcase Ventilation System.

(1) PCV valve.

(2) Ventilation hoses.

(3) Oil filter breather cap.

(4) Manifold inlet (carburetor spacer, etc.).

V. External Exhaust Emission Control System.

(1) Secondary air injection system hoses.

(2) Air system manifolds.

(3) Control valves and air pump.

(4) Manifold reactors.

(5) Catalytic converters.

(6) Exhaust recirculation.

(7) Water injection.

VI. Evaporative Emission Control System.

(1) Engine compartment hose connections.

(2) Carbon storage media.

(3) Fuel tank pressure-relief valve operation.

(4) Fuel vapor control valves.

VII. Air Inlet Components.

(1) Carburetor air cleaner filter.

(2) Hot air control valve.

(b) Diesel Light-Duty Vehicles, Diesel Light-Duty Trucks, and Diesel Heavy-Duty Engines.

I. Engine Mechanical Components.

(1) Valve train.

(2) Cooling system.

a. Coolant.

b. Thermostat.

c. Filter.

(3) Lubrication.

a. Oil filter.

b. Lubricant.

II. Fuel System.

(1) Fuel type.

(2) Fuel pump.

(3) Fuel filters.

(4) Injectors.

(5) Governor.

III. Air Inlet Components.

(1) Air cleaner.

(2) Inlet ducting.

IV. External Exhaust Emission Control System.

(1) Rack limiting devices (aneroid, throttle delay, etc.).

(2) Manifold reactors.

(3) Catalytic converters.

(4) Exhaust recirculation.

(5) Water injection.

[42 FR 33004, June 28, 1977]

APPENDIX VII TO PART 86—STANDARD BENCH CYCLE (SBC)

1. The standard bench aging durability procedures [Ref. §86.1823-08(d)] consist of aging a catalyst-oxygen-sensor system on an aging bench which follows the standard bench cycle (SBC) described in this appendix.

2. The SBC requires use of an aging bench with an engine as the source of feed gas for the catalyst.

3. The SBC is a 60-second cycle which is repeated as necessary on the aging bench to conduct aging for the required period of time. The SBC is defined based on the catalyst temperature, engine air/fuel (A/F) ratio, and the amount of secondary air injection which is added in front of the first catalyst.

CATALYST TEMPERATURE CONTROL

1. Catalyst temperature shall be measured in the catalyst bed at the location where the highest temperature occurs in the hottest catalyst. Alternatively, the feed gas temperature may be measured and converted to catalyst bed temperature using a linear transform calculated from correlation data collected on the catalyst design and aging bench to be used in the aging process.

2. Control the catalyst temperature at stoichiometric operation (01 to 40 seconds on the cycle) to a minimum of 800 °C (±10 °C) by selecting the appropriate Engine speed, load, and spark timing for the engine. Control the maximum catalyst temperature that occurs during the cycle to 890 °C (±10 °C) by selecting the appropriate A/F ratio of the engine during the "rich" phase described in the table below.

3. If a low control temperature other than 800 °C is utilized, the high control temperature shall be 90 °C higher than the low control temperature.

STANDARD BENCH CYCLE (SBC)

Time (seconds)	Engine air/fuel ratio	Secondary air injection
01-40	14.7 (stoichiometric, with load, spark timing, and engine speed controlled to achieve a minimum catalyst temperature of 800 °C).	None
41-45	"Rich" (A/F ratio selected to achieve a maximum catalyst temperature over the entire cycle of 890 °C, or 90° higher than low control temperature).	None
46-55	"Rich" (A/F ratio selected to achieve a maximum catalyst temperature over the entire cycle of 890 °C, or 90° higher than low control temperature).	3% (±0.1%)
56-60	14.7 (stoichiometric, same load, spark timing, and engine speed as used in the 01-40 sec period of the cycle).	3% (±0.1%)